

Remarks

Claims 1-8 are pending in the application. The specification has been amended. Claims 2, 4-5, and 7-8 has been amended. Claims 1 and 3 have been deleted. Reconsideration of the application is respectfully requested for the reasons set forth herein.

1. In the Office Action dated June 12, 2002, the Examiner objected to the disclosure because of an informality. The Examiner stated that on page 4, line 8, a reference to "short sides 9" and "long sides 7" is made. The Examiner further stated that throughout the specification and drawings reference numeral 7 identified the short sides and reference numeral 9 identified the long sides. Although Applicant previously disagreed with this objection, upon further review of the disclosure, the Applicant agrees with the Examiner. Page 4, lines 6-9, therefore, has been amended as follows: "In the embodiment example illustrated by Figures 2, 3, and 4, the frame 19, of 16/9 format, comprises a pair of long sides 9 and a pair of short sides 7." The Applicant invites the Examiner to contact the Applicant in regard to this discrepancy if necessary.

2. The Examiner has rejected claims 1-3 and 5-8 under 35 U.S.C. 102(e) as being anticipated by Lakshmanan et al. (U.S. Patent No. 5,982,085).

Claims 1 and 3 have been deleted from the application. The rejection of claims 1 and 3 under 35 U.S.C. 102(e), therefore, is moot.

Claims 5-8 have been amended to depend from claim 4. The Examiner has indicated that Lakshmanan does not teach all of the elements of claim 4. Specifically, a cathode ray tube wherein the sides including an edge in the form of a metal part substantially parallel to the surface of the mask are the short sides of the frame. Because Lakshmanan does not teach all of

the claim limitations of claim 4, Lakshmanan does not teach all of the claim limitations of dependant claims 5-8. Removal of the rejection of claims 5-8 under 35 U.S.C. 102(a) is respectfully requested.

3. The Examiner has rejected claims 3 and 4 under 35 U.S.C. 103(a) over Lakshmanan et al. (U.S. Patent No. 5,982,085) in view of Sakata et al. (U.S. Patent No. 5,214,349).

Claim 3 has been deleted from the application. The rejection of claim 3 under 35 U.S.C. 102(e), therefore, is moot.

In regard to claim 4, the Examiner stated that the Examiner stated that Lakshmanan et al. discloses a CRT comprising a glass front faceplate 15, a screen of luminescent materials 18, a color-selection mask 22, a frame of rectangular shape 25, and an edge 26 in the form of a metal part. The frame/mask assembly being held by support means engaging pins 14, which incorporate a metal piece including a first portion 27 extending over one of the surfaces of said metal part and a second portion 40 extending in a direction substantially perpendicular to the surface of the mask. Lakshmanan et al. fails to disclose the limitation of "the sides including an edge in the form of a metal part substantially parallel to the surface of the mask being the short sides of the frame." In the same field of endeavor, however, Sakata et al. teaches the equivalence of placing the support pins at the corners or arranging them toward the inner part of the panel in the vicinity of the corner portion, as shown in Figures 27-29. In Figure 29, the support pins are placed on the short sides of the faceplate. The Examiner, therefore, concluded that it would have been obvious to anyone of ordinary skill in the art at the time the invention was made to use Sakata et al.'s teaching to modify the frame/shadow assembly of Lakshmanan et

al. since Sakata et al. teaches that it is equivalent to place the support pins at the corners or arrange them toward the inner part of the panel in the vicinity of the corner portion.

Claim 4 has been amended to contain all of the claim limitations of its base claim 1 and intervening claim 3. The combination of Lakshmanan et al. in view of Sakata et al. neither teaches or suggests all of the claim limitations of claim 4. Claim 4 states that the mask is held under tension between the long sides of the frame, the short sides including an edge in the form of a metal part substantially parallel to the surface of the mask, the mask/frame assembly being held within the faceplate by support means engaging pins fixed to the faceplate, wherein at least two said means each incorporate a metal piece including a first portion extending over one of the surfaces of said metal part, said first portion being secured by welding to the metal part.

Lakshmanan et al. teaches a mask welded to all four sides of a supporting frame 25. The supporting frame 25 includes four corner brackets connected by diaphragms 33, 36 to form a rectangle. Sakata teaches holding members 13c, 13d provided on a frame body 21a, 21b and on support pieces 22a, 22b. The holding members 13c, 13d have through-holes 27 for engaging support pins 26. The holding members 13c, 13d are arranged perpendicular to the surface of the mask 11. Neither Lakshmanan et al. nor Sakata teach or suggest securing a support means over one surface of an edge that extends from short sides of a frame substantially parallel to a surface of a mask. Because the combination of Lakshmanan et al. in view of Sakata does not teach or suggest all the elements of claim 4, the Examiner has failed to set forth a prima facie case of obviousness. Removal of the rejection of claim 4 under 35 U.S.C. 103(a) is respectfully requested.

In view of the arguments and amendments presented herein, the application is believed to be in condition for allowance. Reconsideration and passage to issue is respectfully requested.

Respectfully submitted,

Cosma et al., Applicant(s)

A handwritten signature in cursive script, appearing to read "Jennifer M. Slonaker", is written over a horizontal line.

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Version with Markings to Show Changes Made

In the Specification:

Replace the paragraph on page 4, lines 6-16 with the following:

In the embodiment example illustrated by Figures 2, 3, and 4, the frame 19, of 16/9 format, comprises a pair of short sides 7 [9] and a pair of long sides 9 [7]. The long and short sides have, for example, L-shaped cross-sections and flat parts 37, 39, respectively, substantially parallel to the surface of the mask, which the frame is intended to hold under tension. With the mask 8 being held under tension by being welded to the end 20 of the long sides of the frame, mechanical tension on the mask is maintained by the short sides which have to have sufficient rigidity.

In the Claims:

2. (Amended) The cathode-ray tube as defined in claim 4 [1], wherein the support means are arranged at the corners of the frame.

4. (Amended) [The] A color cathode-ray tube [as defined in claim 3, wherein] comprising a glass faceplate on which is deposited a screen of luminescent materials, a color-selection mask arranged close to the screen, a frame to which the mask is fixed, said frame being of a substantially rectangular shape defined by a pair of opposed long sides and a pair of likewise opposed short sides, the mask is held under tension between the long sides of the frame, the short sides including an edge in the form of a metal part substantially parallel to the surface of the mask [are the short sides of the frame], the mask/frame assembly being held within the faceplate by support means engaging pins fixed to the faceplate, wherein at least two said means each

incorporate a metal piece including a first portion extending over one of the surfaces of said metal part, said first portion being secured by welding to the metal part and at least one second portion extending in a direction substantially perpendicular to the surface of the mask, said metal piece and said support means having coefficients of thermal expansion that cause the sides having the first portion to deform when heated such that ends of the sides not having the first portion approach each other to reduce the tension in the mask during heating.

5. (Amended) The cathode-ray tube as defined in claim 4 [1], wherein the co-efficients of thermal expansion of the materials constituting the frame and the support means are different.

7. (Amended) The cathode-ray tube as defined in claim 4 [1], wherein the first portion of the metal piece of the support means is welded to the surface of the metal part opposite the mask.

8. (Amended) The cathode-ray tube as defined in claim 4 [1], which includes four support means each incorporating a meal piece.

Delete claims 1 and 3.